NDIA SDA Pricing Review 2022-23

Technical Report – Sprinkler Costs

Reliance Restricted

12 May 2023 | Final Report

Building a better working world

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The results of Ernst & Young's work, including the assumptions and qualifications made in preparing the report, are set out in Ernst & Young's report dated 12 May 2023 ("Report"). The Report should be read in its entirety including this notice, the applicable scope of the work and any limitations. A reference to the Report includes any part of the Report. No further work has been undertaken by Ernst & Young since the date of the Report to update it.

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Our conclusions are based, in part, on the assumptions stated and on information from both publicly available information and other sources used during the course of the engagement. The modelled outcomes are contingent on the collection of assumptions as agreed with NDIA and no consideration of other market events, announcements or other changing circumstances are reflected in this Report. Neither Ernst & Young nor any member or employee thereof undertakes responsibility in any way whatsoever to any person in respect of errors in this Report arising from incorrect information provided by the NDIA or other information sources used.

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1 Executive Summary

Purpose and Findings

Purpose

Ernst & Young (“EY”) has been engaged by the National Disability Insurance Agency (“NDIA”) to assist in undertaking technical research and analysis to support the Specialist Disability Accommodation (“SDA”) Pricing Review. This report will examine sprinkler costs as a key input to assist the NDIA in developing new SDA benchmark prices. Further information on the SDA Pricing Review can be found on the NDIS website (NDIS website).

Fire Sprinkler Cost Findings

- Fire Sprinklers are not required under the SDA Design Standard; however, SDA accommodation often falls under Class 3 of the National Construction Code (NCC), whereby sprinklers are a mandatory requirement for Class 2 and 3 buildings. Additionally, under the general best practice appendix of the SDA Design Standard it is recommended that dwellings include fire sprinklers for all design categories and automatic sprinkler systems for dwellings with two or more participants.
- The detailed sprinkler cost estimates have been determined by Quantity Surveyor (QS) MBMpl Pty Ltd (“MBM”) as per AS 2118.1. These are shown within Table 1 on the following page.
- MBM advised the sprinkler system cost for an apartment is based on a rate per sqm while costs for houses are based on a lump sum. The reason for the lower cost of sprinkler systems in apartments is due to increased efficiency in apartments and as the infrastructure is shared across the building.

Fire Sprinkler Maintenance Cost

Each fire sprinkler system per dwelling requires annual estimated maintenance costs of:

- $800 per annum for Apartments
- $2,800 per annum for all other Building Types

2023 Fire Sprinkler Cost Findings

The detailed fire sprinkler cost estimate was determined by quantity surveyors, MBM in accordance with AS 2118.1. Both the capital and maintenance cost estimate of fire sprinklers provided by MBM has been summarised in Table 1. All costs are exclusive of GST.

Table 1: 2023–24 Fire Sprinkler Capital Estimated Cost per Dwelling (Excluding GST)

Dwelling type	Beds	Basic	Improved liveability		Fully accessible		Robust design		High physical support	
			No OOA	With OOA	No OOA	With OOA	No OOA	With OOA	No OOA	With OOA
Apartment	1	$7,200	$7,560	N/A[1]	$7,800	N/A[1]	N/A[2]	N/A[2]	$7,800	N/A[1]
	2 (1 Resident)	$9,480	$9,960	N/A[1]	10,440	N/A1	N/A[2]	N/A[2]	$10,440	N/A[1]
	2 (2 Resident)	$9,480	$10,200	N/A[1]	$10,800	N/A[1]	N/A[2]	N/A[2]	$10,800	N/A[1]
	3	$13,320	$14,280	N/A[1]	$14,520	N/A[1]	N/A[2]	N/A[2]	$14,640	N/A[1]
Villa/ Townhouse/ Duplex	1	$18,377	$18,377	$21,877	$18,377	$21,877	$18,377	$21,877	$18,377	$21,877
	2	$24,483	$24,483	$27,983	$24,483	$27,983	$24,483	$27,983	$24,483	$27,983
	3	$30,588	$30,588	$34,088	$30,588	$34,088	$30,588	$34,088	$30,588	$34,088
House	2	$47,424	$47,424	$53,352	$47,424	$53,352	$47,424	$53,352	$47,424	$53,352
	3	$53,352	$53,352	$59,280	$53,352	$59,280	$53,352	$59,280	$53,352	$59,280
Group home	4	$59,280	$59,280	$62,244	$59,280	$62,244	$59,280	$62,244	$59,280	$62,244
	5	$62,244	$62,244	$65,208	$62,244	$65,208	$62,244	$65,208	$62,244	$65,208

Source: MBM Cost Estimate Report, 2023

[1] A sprinkler cost has not been assessed for apartments with OOA, however the SDA Pricing Model generates a price for apartments with OOA.

[2] No sprinkler cost for Robust apartments has been assessed, as there is no allowance for these within the SDA Pricing Arrangements.

2 Introduction

Background and Purpose

Background

EY has been engaged by the NDIA to assist in undertaking technical research and analysis to support the SDA Pricing Review. This report will examine sprinkler costs as a key input to assist the NDIA in developing new SDA benchmark prices.

Sprinkler costs form a key assumption within the SDA Pricing Model in determining SDA funding by NDIA for new build and existing stock SDA properties. The assumption incorporates an allowance within the model to factor in the additional cost that an SDA owner/investor would likely experience as a result of providing fire sprinklers in an SDA dwelling.

Scope

This report presents the findings from research and analysis on estimated sprinkler costs for SDA in response to the below report scope provided by the NDIA.

1. Review the current methodology by which the Agency accounts for the presence of sprinklers in estimating the construction cost of a New Build, including whether it is appropriate to use the same adjustment for all Building Types, Design Categories and Regions.

Limitations

Based on the scope of work and the information available to us we have performed a like-for-like comparison. To enable this, certain assumptions have also been made. This Report is limited in time and scope, other more detailed reviews or investigations may identify additional issues or considerations than this Report has noted. The results of this work are limited by the availability and quality of data. The results of this work and procedures performed do not constitute an audit, a review or other form of assurance in accordance with any generally accepted auditing, review or other assurance standards, and accordingly EY does not express any form of assurance.

Our findings are based, in part, on the assumptions stated and on information from both publicly available information and other sources used during the course of the engagement. The modelled outcomes (where appliable) are contingent on the assumptions as agreed with the NDIA and no consideration of other market events, announcements or other changing circumstances are reflected in this Report. Neither Ernst & Young nor any member or employee thereof undertakes responsibility in any way whatsoever to any person in respect of errors in this Report arising from incorrect information provided by the NDIA and other information sources used.

3 Detailed Methodology

Detailed Methodology

EY undertook this work in collaboration with our consortium partner Quantity Surveyor (QS), MBMpl Pty Ltd ("MBM") who bring a depth of experience in SDA cost estimation through their work across feasibility studies for both Government and private sector clients. Additional information on MBM's experience and qualifications can be found in our Benchmark Construction Cost Technical Report.

The approach in undertaking the sprinkler cost research is detailed below.

1. Historic Assumptions

- Identified the historic assumptions utilised within the historic SDA Pricing Model used by the NDIA including.

2. Collect and Process Data

- Sought QS insight and input into the following:
  - Design requirements for sprinkler inclusion across all building types, design categories and regions with reference to the SDA Design Guidelines and the Building Code of Australia (Residential Care Buildings).
  - QS costing data for sprinklers across building types, design categories and regions.

3. Analysis of Data and Key Findings

- Provided an overview of the historic methodology and the application of the assumptions within the historic SDA Pricing Model used by the NDIA.
- Outlined design requirements for sprinklers in accordance with the SDA Design Guidelines provided by the NDIA, Building Code of Australia and State/Territory requirements.
- Collated new sprinkler costing estimates from the QS and other available datasets across each building type, design category and region (where available).

4 Historic Methodology and Assumptions

Historic Sprinkler Cost Methodology and Assumptions

The SDA Design Standard recommends fire sprinklers are provided for all design categories, however it is an optional specification rather than required. In line with this, historic benchmark construction pricing does not include any costs associated with fire sprinklers. If a dwelling has installed compliant fire sprinklers then an additional allowance is made to the Base Pricing (Fire Sprinkler Allowance).

The Fire Sprinkler Allowance is payable when fire sprinklers have been installed throughout the SDA dwelling and they comply with all relevant building codes and laws.

The SDA Pricing Model mechanism for the Fire Sprinkler Allowance multiplies the location adjusted Base Pricing by (1 + the Fire Sprinkler Allowance) for the Building Type. This is an allowance for the capital cost of the fire sprinkler system and installation, but excludes consideration for ongoing maintenance and inspection costs.

Historic Sprinklers Total Cost (Capital)

Quantity Surveyors engaged by the NDIA estimated capital sprinkler costs ranging from $70 - $84 per square meter dependant on Design Category. Basic, Improved Liveability and Fully Accessible were estimated at the lower rate and Robust and High Physical Support at the higher rate.

The Sprinklers Total Cost table within the historic Model used by the NDIA multiplies the QS adopted sprinkler cost by 1.08 and 1.125. There is no clear methodology indicating the intention of these multipliers.

These figures were not directly used within the historic Model and were included within it for reference only. It is unknown how the capital cost estimate and multipliers relate to the Fire Sprinkler Allowance.

For the purposes of this report, we have used the historic Sprinklers Total Cost table based on QS estimates for comparison purposes. This is to ensure like-for-like comparison where possible. The historic cost table has been provided on the following page.

Historic Fire Sprinkler Allowance Assumptions

The historic Fire Sprinkler Allowance amount used by the NDIA is determined by Build Type and increases the Base Pricing for both Existing and New Build stock by:

- 1.2% for Apartments
- 1.9% for all other Building Types.

The formula used by the NDIA to calculate the SDA Price is shown below:

Annual SDA price limit applicable))	=	*(Annual Base Price + Breakout Room Price (if*
		x Location Factor
		x (1 + Fire Sprinkler Allowance) (if applicable)

The allowance does not differentiate between Design Category, despite the cost per square meter provided by the QS being higher for Robust and High Physical Support.

Historic Sprinklers Total Cost (Capital)

Table 2 is an extract from the Sprinklers Total Cost table in the historic SDA Model. These were included within the historic SDA Model for reference purposes only and do not inform any pricing calculations within the model.

Table 2: Historic Sprinkler Capital Cost per Dwelling

Sprinklers Total Cost $/sqm		70	70		70		84			84	
Dwelling type	**Beds**	**Basic**	**Improved liveability**		**Fully accessible**		**Robust design**			**High support**	
			No OOA	**With OOA**	**No OOA**	**With OOA**	**No OOA**	**With OOA**	**+1 Room**	**No OOA**	**With OOA**
Apartment	1	$5,000	$5,000	N/A	$6,700	N/A	N/A	N/A	N/A	$10,300	N/A
	2	$6,700	$6,700	N/A	$9,000	N/A	N/A	N/A	N/A	$14,100	N/A
Villa/ Townhouse/ Duplex	1	$5,000	$5,000	$6,600	$6,700	$8,300	$8,100	$10,000	$11,700	$10,300	$12,500
	2	$6,700	$6,700	$8,300	$9,000	$10,600	$10,800	$12,700	$14,400	$14,100	$16,300
	3	$9,700	$9,700	$11,300	$12,600	$14,200	$15,200	$17,100	$18,700	$19,900	$22,100
House	3	$9,700	$9,700	$11,300	$12,600	$14,200	$15,200	$17,100	$18,700	$19,900	$22,100
Group home	4	$13,100	$13,100	$14,700	$16,200	$17,800	$19,500	$21,400	$23,000	$25,100	$27,300
	5	$15,000	$15,000	$16,600	$18,800	$20,400	$22,500	$24,500	$26,100	$29,200	$31,400

Source: Historic SDA Model, 2016

5 Analysis – Fire Sprinkler Cost

Fire Sprinkler Compliance

SDA Design Standard 2019

Fire Sprinklers are not required under the Design Standard, however under the general best practice appendix of the Design Standard it is recommended dwellings provide fire sprinklers for all design categories and automatic sprinkler systems for all dwellings with two or more participants.

Building Code of Australia

In 2019 there was a substantive change in the National Construction Code (NCC) which introduced mandatory sprinkler requirements for Class 2 and 3 buildings.

NCC Specification E1.5a states that the system requirements for the automatic fire sprinkler systems must comply with the following Australian Standards and Fire Protection Association of Australia standards:

- AS 2118.1 Automatic fire sprinkler systems – general systems, or
- AS 2118.4, Automatic fire sprinkler systems sprinkler protection, or
- FPAA101D, except for residential care buildings, or
- FPAA101H, except for residential care buildings

The Class 3 definition includes reference to residential care buildings accommodating people with disability which are required to have automatic fire sprinklers as a consequence of amendments to the DtS Provisions of NCC 2019.

SDA accommodation therefore often falls under Class 3. Additional information on BCA classifications can be found in our Benchmark Construction Cost Technical Report.

Australian Standard

The Australian Standards referenced above specify the general requirements for the design, installation and commissioning of automatic fire sprinkler systems in residential care buildings.

Fire Protection Association of Australia (FPAA)

The FPPA101D Standard is a new design standard for fire sprinkler systems fed from the domestic water system. It is an adaptation of AS 2118.5 to facilitate the use of cost-effective sprinkler systems in mid-rise buildings. The system takes its water supply from the building's domestic water riser, downstream of the domestic pump. This eliminates the need for a dedicated sprinkler system water supply tapping, pump set, control valve assembly and riser.

The FPPA101H Standard is a design standard for sprinkler systems fed from the hydrant system. The system consists of a typical internal hydrant installation commonly required for a Class 2 or Class 3 buildings where coverage cannot be achieved by external hydrants and includes a feed for the sprinkler system which is taken at each floor level directly from the hydrant riser.

Other Considerations

Beyond fire sprinklers, there are other design regulations to protect against fires. These include:

- Fire Resistance
- Access and egress
- Services and equipment

SDA participants in residential care buildings may find other fire evacuation and protection methods difficult to implement or ineffective and not fit for purpose. This may be due to:

- Use of wheelchairs, walking frames or other mobility aids by participants who may not be able to self evacuate
- Independent evacuation may take longer due to participants' disability
- Participants may not react to smoke and fire alarms either delaying their evacuation or not knowing they need to evacuate due to disabilities
- Deafness may impact reaction to alarms
- Vision may impact participants' ability to evacuate and find their way out of a building due to low lighting levels

Future Proofing Buildings

As the SDA market matures and there is an increased understanding of SDA building classifications, the SDA Design Standards may be updated by the NDIA to include mandatory fire sprinklers. Further, Australian Standards and the BCA are updated on a rolling basis by regulators and these may also change the future requirements of fire sprinklers in SDA.

Fire Sprinkler Capital Cost

The allowance for fire sprinkler capital (system and installation) costs was assessed in accordance with AS 2118.1. The detailed estimate was determined by QS, MBM. The cost of fire sprinklers provided by MBM has been summarised on the following page. All costs are exclusive of GST.

Variances across Build Type and Configuration

The cost to install fire sprinklers within SDA Dwellings varies in relation to both Build Type and Gross Floor Area (GFA). Detached dwellings (villas, houses and group homes) require an individual sprinkler system with the total cost of infrastructure attributed to a single dwelling. For detached dwellings it is assumed a storage tank and pump is required as redundancy for the mains water supply. Therefore the sprinkler capital cost for detached dwellings has been costed using a lump sum approach.

Apartment developments often share one sprinkler system across the entire building, resulting in a higher level of efficiency for the infrastructure required. The sprinkler system cost for an apartment is therefore based on a rate per square meter. In line with the *Dwellings per Parcel of Land* assumption for apartments within the Benchmark Construction Cost Technical Report, the QS has costed the sprinkler system to accommodate a 40 unit apartment development. The apartment sprinkler system has been costed to include a water storage tank along with a booster pump and kerb side valve assembly, pipework through risers to units and recessed sprinklers on flexible pipework. This results in $120 per sqm of internal area capital cost for apartments according to MBM.

For all Build Types, the GFA impacts the material costs and infrastructure requirements of the sprinkler system to be installed. Therefore the number of bedrooms and addition of an OOA impact the sprinkler system cost.

Variances across Design Category

The Design Category of a dwelling does not impact the specification or requirements of the sprinkler system. We note that there are GFA variances across some of the Design Categories, however these are not material to impact the size of the sprinkler system required. Therefore no change to sprinkler cost has been attributed to Design Category.

The fire sprinkler cost estimates on a per dwelling basis have been provided in Table 3. All estimated costs are as at 1 July 2023 and exclusive of GST.

Table 3: 2023–24 Fire Sprinkler Capital Estimated Cost per Dwelling (Excluding GST)

Dwelling type	Beds	Basic	Improved liveability		Fully accessible		Robust design		High physical support	
			No OOA	With OOA	No OOA	With OOA	No OOA	With OOA	No OOA	With OOA
Apartment	1	$7,200	$7,560	N/A[1]	$7,800	N/A[1]	N/A[2]	N/A[2]	$7,800	N/A[1]
	2 (1 Resident)	$9,480	$9,960	N/A[1]	10,440	N/A1	N/A[2]	N/A[2]	$10,440	N/A[1]
	2 (2 Resident)	$9,480	$10,200	N/A[1]	$10,800	N/A[1]	N/A[2]	N/A[2]	$10,800	N/A[1]
	3	$13,320	$14,280	N/A[1]	$14,520	N/A[1]	N/A[2]	N/A[2]	$14,640	N/A[1]
Villa/ Townhouse/ Duplex	1	$18,377	$18,377	$21,877	$18,377	$21,877	$18,377	$21,877	$18,377	$21,877
	2	$24,483	$24,483	$27,983	$24,483	$27,983	$24,483	$27,983	$24,483	$27,983
	3	$30,588	$30,588	$34,088	$30,588	$34,088	$30,588	$34,088	$30,588	$34,088
House	2	$47,424	$47,424	$53,352	$47,424	$53,352	$47,424	$53,352	$47,424	$53,352
	3	$53,352	$53,352	$59,280	$53,352	$59,280	$53,352	$59,280	$53,352	$59,280
Group home	4	$59,280	$59,280	$62,244	$59,280	$62,244	$59,280	$62,244	$59,280	$62,244
	5	$62,244	$62,244	$65,208	$62,244	$65,208	$62,244	$65,208	$62,244	$65,208

Source: MBM Cost Estimate Report, 2023

[1] A sprinkler cost has not been assessed for apartments with OOA, however the SDA Pricing Model generates a price for apartments with OOA.

[2] No sprinkler cost for Robust apartments has been assessed, as there is no allowance for these within the SDA Pricing Arrangements.

Adjusted Historic “Like-to-like” Comparison

Comparison between the historic sprinkler cost and the 2023 – 2024 Fire Sprinkler Estimated Costs provides additional insight into the impact of the updated costs. We note this comparison is based on the historic estimated cost per square meter provided in Table 2 , not the Fire Sprinkler Allowance.

To allow a like-for-like comparison between the historic and the 2023 – 2024 Fire Sprinkler Costs, escalation of the historic cost assumptions is required. To show the impact of the escalation factor, we have utilised CPI (as used in the historic Model). The historic Model indexed pricing by 15.4% from 1 July 2017 to 30 June 2023 in line with CPI. Where historic assumptions have been adjusted to reflect the increases in cost since 2016, 15.4% has been applied.

We have considered comparing the historic rate per sqm with MBM’s apartment rate per sqm as the most accurate like-for-like comparison between assumptions, as this removes any variance in GFA from impacting the analysis.

The historic assumption applied a different rate per sqm dependant on Design Category, (Basic, Improved Liveability and Fully Accessible at the lower rate and Robust and High Physical Support at the higher rate) therefore we have compared both.

Table 4: Adjusted Historic Fire Sprinkler Cost Comparison

Sprinkler Capital Cost per SQM	Historic Low Rate	Historic High Rate
2016 Historic Model	$70	$84
CPI Adjusted Historic Model to June 2023	$81	$97
2022 QS Costing	$120	$120
QS vs Adjusted Historic Differential $	$39	$23
QS vs Adjusted Historic Differential %	33%	19%

Source: MBM Quantity Surveyors 2023; EY Research.

The adjusted “like-to-like” comparison shows that the current rate per sqm applied to apartments is 19% to 33% higher than the historical assumption. This may be due to:

- Updated specifications since the historical assumptions were adopted
- The historic assumption applying to all Build Types

Historic Methodology Differences

There are two main differences between the historic sprinkler cost estimates and the methodology applied by MBM within this report. There may be other variances, such as the type of sprinkler system costed, however the historic assumptions did not provide this level of detail. These are:

- MBM advised a lump sum price applied is more suitable for detached dwellings, rather than a rate per sqm. According to MBM, small adjustments in the GFA do not have a material impact on the sprinkler system required for the whole dwelling.
- MBM advised that the fire sprinkler system specifications do not change based on Design Category i.e. a High Physical Support dwelling does not require a different fire sprinkler system than a Basic dwelling as they both serve the same purpose and need to meet the same Australian Standards.

Adjusted Historic Cost Differential

In line with the previous ‘like-to-like” comparison, the historic sprinkler cost assumptions have been adjusted to June 2023 figures using CPI as used in the historic Model. The percentage difference between the adjusted historic costs and 2023 – 2024 Fire Sprinkler Costs (estimated by MBM) is shown on the following page in Table 5. Across the design configurations there is a significant range of percentage increases and decreases. Overall:

- As the historic costs were on a sqm basis, any changes in Reference Design GFA would impact the overall price. The historic GFA assumptions vary from the updated reference designs, for example a one bedroom High Physical Support Apartment was 101sqm in the historic assumptions but 61sqm in the 2022 Reference Designs and this is the main factor in the -34% adjusted cost decrease (see Benchmark Construction Cost Technical Report for more detail on GFA differential).
- There is a clear difference arising from the historic assumption having a lower rate per sqm for Basic, Improved Liveability and Fully Accessible Design Categories.
- Detached dwellings have the highest price increase, which may be due to MBM’s price including a full sprinkler system per dwelling.
- MBM’s cost estimate assumes a storage tank and pump is required, it is unclear if the historic assumption made any allowance for this

As outlined on the previous page, Table 5 shows the percentage difference between the adjusted historic costs and 2023 – 2024 Fire Sprinkler Costs (estimated by MBM).

Table 5: Adjusted Historic Fire Sprinkler Cost Percentage Difference

Dwelling type	Beds	Standard	Improved liveability		Fully accessible		Robust design		High support	
			No OOA	With OOA	No OOA	With OOA	No OOA	With OOA	No OOA	With OOA
Apartment	1	25%	31%	N/A	1%	N/A	N/A	N/A	-34%	N/A
	2	23%	32%	N/A	4%	N/A	N/A	N/A	-34%	N/A
Villa/ Townhouse / Duplex	1	218%	218%	187%	138%	128%	97%	90%	55%	52%
	2	217%	217%	192%	136%	129%	96%	91%	50%	49%
	3	173%	173%	161%	110%	108%	74%	73%	33%	34%
House	3	377%	377%	355%	267%	262%	204%	200%	132%	132%
Group home	4	292%	292%	267%	217%	203%	163%	152%	105%	98%
	5	260%	260%	240%	187%	177%	140%	131%	85%	80%

Source: MBM Quantity Surveyors 2023; EY Research.

Fire Sprinkler Maintenance Cost

The estimated cost of fire sprinkler maintenance was determined by quantity surveyors, MBM. The maintenance cost align with the testing requirements set out in AS2118.1 and include:

- Annual inspections
- Pressure switch testing
- Sprinkler tank and pipes flushed
- Sprinkler heads testing

Cost estimates are exclusive of region specific costs such as requirements for increased frequency of inspections or audits.

The maintenance cost is an annual rate per dwelling and does not directly relate to the capital cost assumption. This is due to the fact that the inspection activities do not materially change between the system installed for a 2 bedroom house compared to a 4 bedroom house. Apartments do have a lower cost due to the efficiency of multiple dwellings sharing a fire sprinkler system and to reflect the lower capital cost of apartments.

The annual maintenance cost estimates have been provided in Table 6.

Table 6: Estimated Maintenance Cost per Annum

Dwellings Sprinkler Estimated Maintenance Cost Per Annum			
Build Type	**Low Range**	**Medium Range**	**High Range**
Apartment	$600	$800	$1,000
All other Build Types	$2,380	$2,800	$3,220

Source: MBM Quantity Surveyors 2023

MBM advised the medium range is suitable to be adopted, therefore consideration of the below estimated maintenance costs per dwelling should be included:

- $800 per annum for Apartments
- $2,800 per annum for all other Building Types.

These costs should be incorporated within ownership costs and general maintenance allowances so they are not accounted for twice.

6 Appendices

Annexure A: Glossary

Term	Meaning
BCA	Building Code of Australia
Building Type	The Design Category as per the SDA Framework - Apartment, Duplex/Villa/Townhouse, House or Group Home.
Apartment	Self-contained units that are part of a larger residential building.
Duplex, Villa, Townhouse	Separate but semi-attached properties within a single land title or strata titled area. This also includes stand-alone villas or granny-flats.
House	Detached low-rise buildings with garden or courtyard areas with fewer than 4 bedrooms.
Group Home	Houses that have 4 or 5 bedrooms.
Class 2 building	A building containing 2 or more sole-occupancy units each being a separate dwelling.
Class 3 building	A residential building, other than a building of Class 1 or 2, which is a common place of long term or transient living for a number of unrelated persons, including– (a) a boarding house, guest house, hostel, lodging house or backpackers accommodation; or (b) a residential part of a hotel or motel; or (c) a residential part of a school; or (d) accommodation for the aged, children or people withdisabilities1 (e) a residential part of a health care building which accommodates members of staff; or (f) a residential part of a detention centre. 1. Class 3 residential care buildings accommodating the aged, children or people with disability are required to have automatic fire sprinklers as a consequence of amendments to the DtS Provisions of NCC 2019 and are therefore not within the scope of this analysis.
Design Category	The Design Category as per the SDA Framework - Basic, Improved Liveability, Fully Accessible, Robust or High Physical Support.
Basic	Housing without specialised design features but with other important SDA characteristics (e.g. location, privacy, shared supports).
Improved Liveability (IL)	Housing that has been designed to improve 'Liveability' by incorporating a reasonable level of physical access and enhanced provision for people with sensory, intellectual or cognitive impairment.

Term	Meaning
Fully Accessible (FA)	Housing that has been designed to incorporate a high level of physical access provision for people with significant physical impairment.
Robust	Housing that has been designed to incorporate a high level of physical access provision and be very resilient, reducing the likelihood of reactive maintenance and reducing the risk to the participant and the community.
High Physical Support (HPS)	Housing that has been designed to incorporate a high level of physical access provision for people with significant physical impairment and requiring very high levels of support.
Enrolled Dwelling	A dwelling enrolled under section 26 of the *NDIS (Specialist Disability Accommodation) Rules 2020* to provide SDA.
Fire Sprinkler Allowance	Mechanism which increases the Base Price for dwellings which has a compliant fire sprinkler system
GFA	Gross floor area
GST	Goods and Services Tax
Historic Model	2016 SDA Pricing Model developed by NDIA.
MBM	Engaged QS for technical reports
NCC	National Construction Code
NDIA	National Disability Insurance Agency.
NDIS	National Disability Insurance Scheme.
QS	Quantity Surveyor
SDA	Specialist Disability Accommodation.

Term	Meaning
SDA Type	The SDA type under the SDA Framework - Existing, Legacy, New Build or New Build (refurbished).
New Build	An SDA dwelling that was built (has a certificate of occupancy dated) after 1 April 2016 and meets all of the requirements under the SDA Rules and NDIS Pricing Guide.
Existing	Dwellings built before 1 April 2016 that were used as disability related supported accommodation under a previous State, Territory or Commonwealth scheme. Existing dwellings must substantially comply with the requirements of a new build, and must meet the maximum resident requirement (5 residents or less).
Legacy	Existing dwellings that do not meet the maximum resident requirement of 5 residents or less. Over time, the NDIA will stop making SDA payments towards Legacy dwellings.
New Build (refurbished)	A dwelling that was built before 1 April 2016 but has been significantly refurbished since and now meets all of the requirements for a new build in the SDA Rules and NDIS Pricing Guide. In order to qualify for as a New Build (refurbished) providers must spend a minimum amount. These minimum amounts are specified per dwelling type in the SDA Pricing Guide.
SQM	Square meter area measurement

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